

CLAIMS

1. An autonomous mobile unit for cleaning electrolytic cells CHARACTERIZED because it includes a system or process and diverse components that include a suction manifold, a pumping system, a solids-liquids separator, a recirculation manifold, a solids retainer and a control system that when used permits the cleaning of the electrolytic cells without the need to short-circuit the cell.
2. A mobile unit according to claim 1, CHARACTERIZED by a pumping system made up of: a diaphragm pump, a screw pump, a centrifugal pump, an electric diaphragm pump, a vacuum pump, a submergible pump and a peristaltic pump.
3. A mobile unit according to claim 1, CHARACTERIZED by a solids-liquids separator made up of the following equipment: a plate filter press, a band filter press, a hydrocyclone, a centrifuge or decanter, a bag filter, a rotary filter and an online filter screen.
4. A mobile unit according to claim 3, CHARACTERIZED by a stainless steel piping in the pump's discharge line and polypropylene piping in the pump's discharge line.
5. A process for cleaning electrolytic cells using the system and the components of any of claims 1 to 4 inclusive in different stages of application CHARACTERIZED because it avoids the stages of cleaning the anodic sludge accumulated in the bottom of the electrolytic cells that are based on the removal from the electrowinning cells of the production cycle using a short-circuiting frame; cutting off the flow of the electrolytic solution that is fed into the cell; removal of the cathodes and anodes present in the cell; emptying or purging of the electrolyte solution from the cell by means of pumping systems or, if possible, by means of valves located in the lower part of the cell; and the dissolving of

the sedimented solids by means of washing the anodic sludge and its subsequent removal, either by emptying the resulting solution by means of the purge valve located at the bottom of the cell or else by gathering the anodic sludge by means of a mechanical device for collecting solids or sludge.